GAMSKI, Mieczyslaw

The role of tranquillizing drugs in the medical clinic. Postepy hig. med. dosw. 18 no.6:945-951 N-D '64.

1. III Medical Clinic, Medical School (Gdansk); L. Hirszfelds Institute of Immunology and Experimental Therapy, Polish Academy of Sciences (Wroclaw).

GAMSKI,M.

Prof. Witold Gravowski, M.D. Pol. tyg. lek. 19 no.38:1465-1466
21 S '64

GAMSKI, M.

Polish cardiology in the past 20 years. Kardiol. Pol. 7 no.3: 169-170 J '64.

GAWSKI, S.

Coreport II to the report "Examination of the Effectiveness of Investments in Inland Navigation." p.98
GOSPODARKA WODNA (Naczelna Organizacja Techniczna) Warszawa
Vol. 16, no. 3, Mar. 1956

So. East European Accessions List Vol. 5, No. 9 September 1956

Gamtsemlidze, G. A.

536.48 : 532.133

8704. Experimental verification of Landau's formula for the determination of the coefficient of viscosity of liquids by the method of damped torsional oscillations of a disk. G. A. GAMTSEMLIDZE. *Dokl. Akad. Nauk SSSR*, 100, *No.* 3, 441–4 (1955) In Russian.

Model tests with distilled water show that Landau's correction for disk thickness is valid under conditions under which the viscosity of helium II has been determined by E. L. Andronikashvili [Abstr. 3945 (1949)] and later investigators using the disk oscillation method. The discrepancy between Andronikashvili's results and those obtained by Hollis-Hallett [Abstr. 8374 (1953)] using the rotating cylinder method and those calculated by Zinov'eva [Abstr. 6988 (1955)] from data on second sound velocity is thought to be due to the intrinsic properties of helium II.

A. GELBTUCH

I. V. Stalin State Univ., Tiflis.

AUTHOR: Gamtsemlidze, G. A. SOV/56-34-6-9/51

TITLE: Concerning the Problem of the Existence of a Tangential Discontinuity of the Velocity of the Superfluid Component of Helium Near a Wall (K voprosu o sushchestvovanii tangentsial'nogo razryva skorosti sverkhtekuchey komponenty geliya vblizi stenki)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 34, Nr 6, pp 1435-1437 (USSR)

ABSTRACT: This paper gives an experimental verification of a hypothesis formulated by Ginzburg (Ref 4): There may be a tangential discontinuity of the velocity of the superfluid part of helium II on the boundary of the fluid with the wall. One has to take into account the surface energy corresponding to this discontinuity which according to Ginzbrug's estimation amounts to $\sigma = (5.10^{-2} - 5.10^{-3})$ erg/cm^2. According to Ginzburg's opinion, the influence of the surface energy on the flow of helium II must cause the existence of a certain minimal energy σS. This minimal energy is necessary to put into motion a solid body (which is placed in helium II) with the surface S. The experimental device consists of a system of 45 mica discs

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Concerning the Problem of the Existence of a Tangential Discontinuity of the Velocity of the Superfluid Component of Helium Near a Wall

with a thickness of 50 μ and a diameter of 32 mm which are separated by aluminum discs. Also the other parts of the measuring device are discussed. The experiments have to detect an effect which is similar to the friction of rest between two solid surfaces. When such an effect exists the above mentioned discs placed in helium II will remain without any motion in the position of rest until the corresponding torsion angle of the thread (by which the discs are suspended) is determined. The sought energy σS may be found by determination of the extreme torsion angle $\varphi_{extreme}$ if one knows the elastic constant of the thread. This measuring device was also calibrated in a vacuum, and 2 calibration curves are shown in a figure. The experimental results are given in a table. According to these results it is not probable that there is a "friction of rest" in helium II under the conditions of an "infinite" liquid. Therefore no superficial tangential discontinuities of the velocity are observed on the boundary which separates the moving body from the helium II. If there was really a surface of discontinuity, the corresponding value of σ would not be greater

Concerning the Problem of the Existence of a Tangential Discontinuity of the Velocity of the Superfluid Component of Helium Near a Wall

than $\sim 10^{-10}$ erg/cm^2. The author thanks the supervisor of this investigation E. L. Andronikashvili, Professor, for useful remarks and advice, the scientific co-worker B. P. Zhvaniya and also the liquefying machine operators I. M. Paramonov and E. I. Shalvashvili. There are 3 figures, 1 table, and 5 references, 3 of which are Soviet.

ASSOCIATION: Tbilisskiy gosudarstvennyy universitet
(Tbilisi State University)

SUBMITTED: January 20, 1958

G. A. Gamtsemlidze

24(0) SOV/53-67-4-7/7

AUTHOR: Chentsov, R.

TITLE: The Fifth All-Union Conference on the Physics of Low Temperatures (5-ye Vsesoyuznoye soveshchaniye po fizike nizkikh temperatur)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 67, Nr 4, pp 743-750 (USSR)

ABSTRACT: This Conference took place from October 27 to November 1 at Tbilisi; it was organized by the Otdeleniye fiziko-matematicheskikh nauk Akademii nauk SSSR (Department of Physico-mathematical Sciences of the Academy of Sciences, USSR), the Akademiya nauk Gruzinskoy SSR (Academy of Sciences, Gruzinskaya SSR), and the Tbilisskiy gosudarstvennyy universitet im. Stalina (Tbilisi State University imeni Stalin). The Conference was attended by about 300 specialists from Tbilisi, Moscow, Khar'kov, Kiyev, Leningrad, Sverdlovsk, and other cities as well as by a number of young Chinese scientists at present working in the USSR. About 50 lectures were delivered which were divided according to research fields. - I. Liquid Helium. Reports were delivered by the researchers of the Laboratoriya nizkikh temperatur TGU (Laboratory for Low Temperatures of Tbilisi State University) under the supervision of E. L. Andronikashvili: D. S. Tsakadze, Yu. G. Mamaladze and S. G. Matinyan spoke about the investigation of the damping of rotational oscillations of a single disk in He II in dependence on the rotation rate. G. A. Gamtsemlidze spoke about the influence exercised by the state of the disk surface on critical rate and on the damping of its oscillations in the transcritical range. V. P. Peshkov (IFP AN SSSR - Institute for Physical Problems AS USSR) spoke about further investigations of the boundary between superfluid and non-superfluid helium (discovered by himself) in a heat flow. This boundary characterizes the density- and temperature jump. Kuang, Wei-yen, V. N. Zinov'yeva and V. P. Peshkov spoke about investigations at extremely low temperatures (down to 0.5°K) which were attained by the method of the evacuation of

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He^3-vapors. Kuang, Wei-yen investigated in the interval 0.57 - 2.07°K the phenomenon of the temperature jump (discovered by P. L. Kapitsa in 1941) on the boundary of a solid (in this case Cu) by means of He II; for the thermal resistance not the T^3-law but a T^n-law holds, where $n=2.6\pm0.1$. Zinov'yeva and Peshkov investigated, among other things, also the phase diagram of He^3 dissolved in He^4 (20 - 87%). V. L. Ginzburg (FIAN) gave a report on the phenomenological theory of He II in the region of the λ-point in consideration of quantum effects (the theory was developed by himself and by L. P. Pitayevskiy). B. T. Geylikman (IAE AN SSSR - Institute for Atomic Energy, AS USSR) delivered a short report on the theory of phase transition in liquid He^4. I. M. Lifshits and D. G. Sanikidze (KhFTI AN USSR - Khar'kov Physico-technical Institute AS UkrSSR) investigated the melting of solid He^3 on the basis of Landau's theory of the Fermi-fluid and found that melting pressure as a function of temperature has a minimum at 0.5°K (Pomeranchuk-effect). The comprehensive discussion was held under the supervision of P. L. Kapitsa.-

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10(4)

AUTHOR: Gamtsemlidze, G. A. SOV/56-37-3-43/62

TITLE: On Landau's Correction Factor in the Determination of the Viscosity of a Liquid

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 3(9), pp 855 - 857 (USSR)

ABSTRACT: The solution of the Navier-Stokes equation for a round disk performing axial torsional oscillations in an unlimited liquid yields the expression $\eta = 4I^2(\gamma - \gamma_0)^2\theta/\pi^3R^8\rho N^2$ for the viscosity coefficient of the liquid (I = moment of inertia of the disk, R = its radius, θ = oscillation period, ρ = the density of the liquid, N = the number of disks, γ and γ_0 the damping coefficients in the liquid and in vacuum). This formula is obtained in the approximation $\gamma/\omega \ll 1$, $R/\lambda \gg 1$, $\theta_0/\theta \approx 1$. For the determination of η by means of this formula, L. D. Landau introduced a correction coefficient, so that the formula is: $\eta = 4I^2(\gamma - \gamma_0)^2\theta/\pi^3R^8\rho N^2(1+2d/R+2\lambda/R)^2$. ($D$ = thickness of the disk, λ = penetration depth of the viscosity

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waves). In the present "Letter to the Editor" an experimental method for the determination of η is described. The method is based upon using the oscillations of a disk in the liquid to be investigated (He II); the effect of the viscosity forces upon the lateral surface of the disk is eliminated, and no correction coefficients are introduced. Work was carried out with 1,2,3, and 6 disks, the distance being $1 \gg \lambda$. Figure 1 shows the temperature dependence of the viscosity coefficient of the normal component of He II in the temperature range of from 1 - 2.1 °K. Some of the data were obtained from a paper by Andronikashvili (Ref 2), calculated with Landau's correction coefficients, the others were calculated according to the first-mentioned formula. The values with correction coefficient are, in general, somewhat higher. Figure 2 shows the results of the four systems investigated by the author ($N = 1$, $d_1 = 0.276$ cm, $N = 2$, $d_2 = 0.138$ cm, $N = 3$, $d_3 = 0.092$ cm, $N = 6$, $d_6 = 0.046$ cm). The curve $\eta_n(T)$ was calculated according to Landau's formula by the method of successive approxima-

tion for the values of $(d+\lambda)/R$ differing in each case. It was found that for all temperatures the values of η, calculated with elimination of the effect of lateral surfaces, agree well with those calculated according to Landau's formula (for thin disks). The so-called corner effect was found to be negligibly small. The author finally thanks Professor E. L. Andronikashvili and Yu. G. Mamaladze for discussions and advice. There are 2 figures and 2 Soviet references.

ASSOCIATION: Tbilisskiy gosudarstvennyy universitet (Tbilisi State University)

SUBMITTED: May 12, 1959

GAMTSEMLIDZE, G.A.

Critical regime in experiments with a vibrating disk in helium II. Zhur.eksp.i teor.fiz. 37 no.4:950-956 O '59. (MIRA 13:5)

1. Tbilisskiy gosudarstvennyy universitet.
(Helium) (Damping (Mechanics))

GAMTSEMLIDZE, G. A., Cand Agric Sci (diss) -- "Productive varieties and basic measures to increase the yield of grapes in Mayakovskiy Rayon". Tbilisi, 1960, published by the Acad Sci Georgian SSR. 17 pp (Min Agric USSR, Georgian Order of Labor Red Banner Agric Inst), 200 copies (KL, No 14, 1960, 134)

ANDRONIKASHVILI, Elevter Luarsabovich; GAMTSEMLIDZE, Georgiy Aristoyevich; KANCHELI, Otar Arkhipovich; MAMALADZE, Yuriy Georgiyevich; KUZNETSOVA, Ye.B., red.; KRYUCHKOVA, V.N., tekhn. red.

[Laboratory works on physics; mechanics, molecular physics, electricity, and magnetism] Laboratornye raboty po fizike; mekhanika, molekuliarnaia fizika, elektrichestvo i magnetizm. Pod red. E.L.Andronikashvili. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1961. 182 p. (MIRA 15:3)
(Physics--Laboratory manuals)

PARKADZE, Vakhtang Davidovich; GAMTSEMLIDZE, Georgiy Aristovich; DATEBASHVILI, David Yakovlevich; DZHAPARIDZE, Vakhtang Razhdenovich

[Laboratory manual on physics] [Laboratornyi praktikum po fizike. Tbilisi, Gos.izd-vo "TSodna,"] Pt.2. 1963. 314 p. [In Georgian] (MIRA 17:4)

L 23750-66 EWT(1)/EWP(m)/EWT(m)/EWA(d)/ETC(m)-6/EWA(1) JD/WW

ACC NR: AP6007210 SOURCE CODE: UR/0056/66/050/002/0323/0326

AUTHORS: Gamtsemlidze, G. A.; Dzhaparidze, Sh. A.; Salukvadze, Ts. M.; Turkadze, K. A.

ORG: Tbilisi State University (Tbilisskiy gosudarstvennyy universitet)

TITLE: Determination of the slip coefficient of vortices in rotating liquid helium II

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 2, 1966, 323-326

TOPIC TAGS: liquid helium, quantum liquid, flow measurement, vortex tube

ABSTRACT: To eliminate the effect of slip on measurements of the tension of Onsager-Feynman vortex filaments in liquid helium, the authors have constructed an instrument in which the vortices are subjected to continuous action, so that they cannot resume their initial configuration during the observation time, and their stationary deformation can be determined. The instrument comprises a torsion

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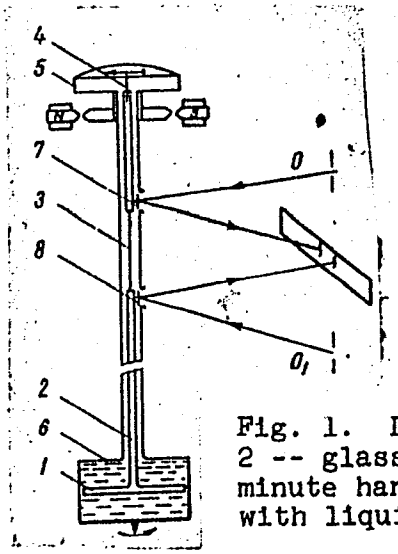

pendulum (Fig. 1) which can be rotated together with the liquid helium by a permanent magnet coupled to a telechron motor. The interaction between the vortices and a solid disc rotating in the helium was determined by measuring the lag of the freely suspended disc relative to a suspension that rotates additionally relative to the disc. An optical system was used to record the relative displacements of the suspension and of the disc. The measured lag amounted to approximately $(4.4 \pm 0.4) \times 10^{-3}$ radians at

Fig. 1. Diagram of instrument. 1 -- Rotating disc, 2 -- glass rod, 3 -- phosphor bronze suspension, 4 -- minute hand of stop watch, 5 -- stop watch, 6 -- vessel with liquid helium, 7, 8 -- mirrors.

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ACC NR: AP6007210

a. speed of rotation of 0.038 sec^{-1} and a temperature 1.46K. The slip coefficient is determined from the magnitude of this lag and is in agreement with earlier data obtained by a different method. The authors thank E. L. Andronikashvili for suggesting the topic and valuable remarks, Yu. G. Mamaladze for participating in a discussion of the results, and V. G. Tartinskikh for technical help. Orig. art. has: 4 figures and 6 formulas.

SUB CODE: 20/ SUBM DATE: 27Jul65/ ORIG REF: 002/

Card 3/3 UDC

L 23748-66 EWT(1)/EWP(m)/EWA(d)/ETC(m)-6/EWA(1) WW

ACC NR: AP6007211 SOURCE CODE: UR/0056/66/050/002/0327/0329

AUTHORS: Gamtsemlidze, G. A.; Dzhaparidze, Sh. A.; Turkadze, K.A.

ORG: Tbilisi State University (Tbilisskiy gosudarstvennyy universitet)

TITLE: Decay of Onsager-Feynman vortices and collectivization of vortex oscillations

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 2, 1966, 327-329

TOPIC TAGS: liquid helium, quantum liquid, vortex tube, rotation, vortex

ABSTRACT: The purpose of the investigation was to measure the half-life of the vortices produced in rotating helium II after the vessel stopped rotating. The measurement setup was the same as used in a companion paper by the authors in the same source (ZhETF v. 50, 323, 1960; Acc nr: AP6007210), and the measurement procedure consisted of rotating the liquid helium for more than 30 minutes to establish a stationary rotation mode, stopping the motor, and determining the half-life of the vortices by calculating from the difference of two

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L 23748-66

ACC NR: AP6007211

dampings, the damping of the disc in the stationary helium II, and the damping at a certain instant of time after stopping the container. Plots of the logarithm of the excess damping on the time, made at 1.46K, show that the damping curves consist of two straight lying sections with different slopes, corresponding to two time constants. In the case of a velocity of 0.24 sec^{-1}, the decay had a lifetime of 70 ± 5 seconds at times shorter than 140 seconds after the start of the deceleration of the liquid, and 55 ± 5 seconds after 140 seconds. In the case of 0.48 sec^{-1} angular velocity the change in the half-life occurred at 250 seconds. At low velocity (0.10 sec^{-1}), the decay only had a single half-life. The presence of two half-lives is attributed to collectivization of the vortices. The authors are grateful to Yu. G. Mamaladze for participating in the discussion of the results. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 27Jul65/ ORIG REF: 004/ OTH REF: 001

Card 2/2

L 32612-66 EWT(l)/EWI(m)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6014023 SOURCE CODE: UR/0056/66/050/004/0856/0860

AUTHOR: Andronikashvili, E. L.; Gamtsemlidze, G. A.; Dzhaparidze, Sh. A.

ORG: Tbilisi State University (Tbilisskiy gosudarstvennyy universitet)

TITLE: Study of the character of oscillations of helium II near the surface of an oscillating disc by the resonance method

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 4, 1966, 856-860

TOPIC TAGS: liquid helium, quantum liquid, vortex, superfluidity, WAVE PROPAGATION

ABSTRACT: The purpose of the investigation was to determine the depth of penetration of the supercritical (vortical) oscillations produced in He II in which a disc oscillates with amplitude above a critical value, and caused by formation of quantum vortex filaments. To determine the penetration and to study the character of the propagation of the waves generated by the disc in this region, the authors used a special setup permitting measurement of the oscillations by reflecting a beam of light from a suspended mirror. The tests show that at amplitudes below critical, the depth of penetration agrees with the value obtained for a viscous wave, but at supercritical amplitudes the depth of penetration decreases with increasing amplitude. In the subcritical mode, the depth was 0.48 ± 0.02 mm, and in the supercritical mode the values obtained were 0.33 ± 0.01, 0.36 ± 0.01, and 0.40 ± 0.01 mm at amplitudes of 0.73, 0.61, and 0.44 radians, respectively. The temperature dependence of the depths of

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ACC NR: AP6014023

penetration for subcritical and supercritical modes are determined in the range 1.6 - 1.9K, in order to determine the contribution made by the dragging of the superfluid component to the effective depth of penetration of the waves. Both depths decrease with increasing temperature in quantitative agreement with the theoretical deductions. An empirical formula is presented for the depth of penetration of the supercritical oscillations. The authors thank Yu. G. Mamaladze for a discussion of the results. Orig. art. has: 7 figures, 4 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 120ct65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

GAMTSEMLIDZE, M. Ya.

22664 Gamtsemlidze, M. Ya. K Voprosu Ob Izuchenii Sekretornoy Funktsii Zheludka Pri Ostrykh Gepatitakh. Trudy (Tbilis. Gos. Med. In-T), T. V, 1948, S. 91-99---NA Gruz. Yaz. ---Rezyume NA Rus. Yaz.----Bibliogr: 12 Nazv

So; Letopis', No. 30, 1949

GAMTSEMLIDZE, P. K.

Adzharia - Forests and Forestry

Forestry in the Adzhar A.S.S.R. Les. khoz. 5 no. 6, June 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1953, 2 Uncl.

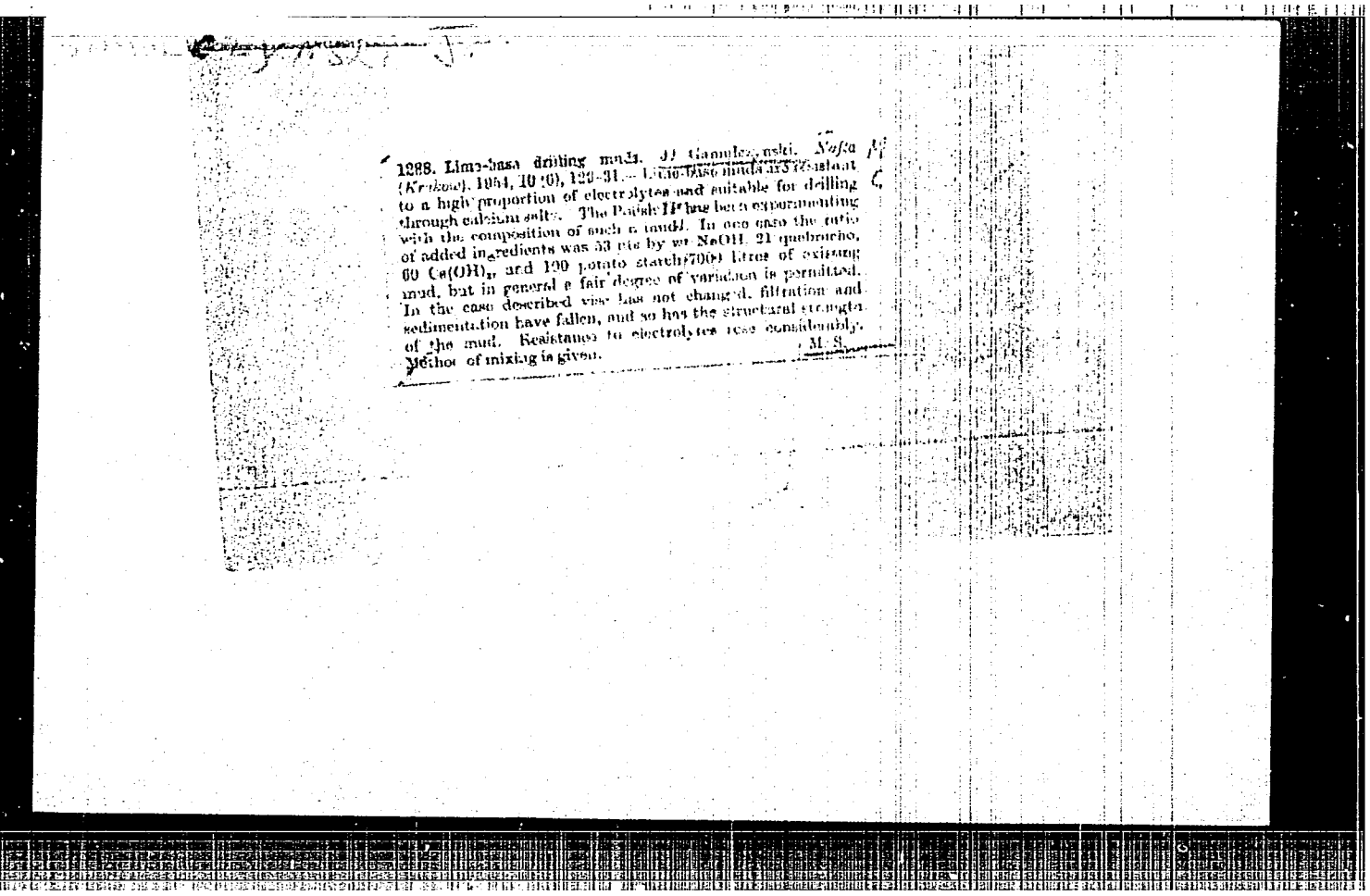
MOLOTKOVSKIY, G.Kh. [Molotkovs'kyi, H.Kh.]; GAMULA, M.I. [Hamula, M.I.]

Dynamics of ascorbic acid in potato tubers during storage in connection with the phenomenon of polarity. Ukr. bot. zhur. 17 no.6:28-38 '60. (MIRA 14:3)

1. Chernovitskiy gosudarstvennyy universitet, kafedra fiziologii rasteniy.
(Ascorbic acid) (Potatoes) (Polarity (Biology))

GAMULCZYNSKI, J

144. Lime drilling mud. J. Gamulczynski. *Bull. Polish. Inst. Petrol.*, 1953, 3, 11–12 (Suppl. to *Nafta* (*Krakow*), 1953, 9).—Since Na^+ is not as good as Ca^{++} for some purposes, the Polish Institute of Petroleum (Drilling Section) is working on a mud based on natural loams available. Additives are: NaOH, 0·5–1·0%; quebracho (or cellulose-sulphonic acid salts), 0·2–0·6%; lime, 0·7–3%; starch, 1–2%. pH must be ca. 11·5. During conversion visc rises and then falls again. Resulting muds are very good. They are yet to be proved in boreholes. M. S.



1288. Lime-base drilling muds. J. Gawlowski. *Nafta* (*Krakow*). 1954, 10 (9), 129–31.— Lime-base muds are resistant to a high proportion of electrolytes and suitable for drilling through calcium salts. The Polish Oil Inst. has been experimenting with the composition of such a mud. In one case the ratio of added ingredients was 33 pts by wt NaOH, 21 quebracho, 60 $Ca(OH)_2$, and 100 potato starch/700 litres of existing mud, but in general a fair degree of variation is permitted. In the case described visc. has not changed, filtration and sedimentation have fallen, and so has the structural strength of the mud. Resistance to electrolytes rose considerably. Method of mixing is given. M. S.

GAMULIN, A.

GAMULIN, A.

Yugoslavia (430)

Agriculture-Plant and Animal Industry

Economic planning and fishery cooperatives, p. 57. MORSKO RIBARSTVO. Vol. 4, no. 5, 1952.

East European Accessions List. Library of Congress, Vol. 2, no. 3, March 1953.
UNCLASSIFIED.

GAMULIN, A., kand.tekhn.nauk

MiG-15 piloting and navigation device. Kryl.rod.12 no.4:17-19 Ap '61. (MIRA 14:7)
(Airplanes—Electronic equipment)

KLEPAC, Josip, inz.; GAMULIN, Jursj, inz.

Reconstruction of the water-supply system of Dubrovnik.
Gradevinar 14 no.3:85-90 Mr '62.

GAMULIN, A., inzh.; SOFRONOV, Ye.

Instruments show the route (conclusion). Kryl. rod. 15 no.5: 20-21 My '64. (MIRA 17:8)

GANTMIN, N.S., kand.tekhn.nauk

Nozzle-flap type hydraulic amplifier. Trudy MAI no.134:89-99 '61. (MIRA 14:8)

(Hydraulic control)

SOV/86-59-1-38/39

AUTHOR: Gamulin, A.G., Engr Capt

TITLE: Automatic Control of Aircraft and Flight Safety (Avtomaticheskoye upravleniye samoletom i bezopasnost' poleta)

PERIODICAL: Vestnik vozdushnogo flota, 1959, Nr 1, pp 90-95 (USSR)

ABSTRACT: The author describes some foreign systems of autopilots and flight safety. There are four diagrams.

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Gamulin, A.G.

S/024/60/000/04/012/013
E140/E463

AUTHOR: Gamulin, A.G. (Moscow)

TITLE: Quantitative Evaluation of Safety of Flight with Automatic Control

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, No.4, pp.184-189

TEXT: The note attempts to present a mathematical analysis of the effects of a safety device for automatic pilots which cuts out the automatic pilot when the human pilot takes over upon signalling of a potentially (or actually) dangerous situation. The effects considered are limitation on the flight-tactical characteristics of the plane in automatic flight, the probability of false alarm, the ability of the safety device to cope with situations signalled by the automatic pilot under abnormal conditions. An interesting sidelight in the note is the discussion of Eq.(2.3) which is valid for interruption of the closed loop aircraft-autopilot. The author remarks that this type of defect "is encountered very often ... for example, short circuit in the electric power line to the servomotor for control signals". A discussion on procedures for determination of the

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S/024/60/000/04/012/013
E140/E463

Quantitative Evaluation of Safety of Flight with Automatic Control

physical parameters for quantitative treatment of the problem concludes the note. There are 6 figures.

SUBMITTED: February 4, 1960

Card 2/2

GAMULIN, A.G. (Moskva)

Quantitative evaluation of the safety of automatically controlled flight. Izv. AN SSSR. Otd. tekh.nauk. Energ. i avtom. no.4:184-189 Jl-Ag '60. (MIRA 13:8)
(Navigation (Aeronautics)) (Electronics in aeronautics)

27133

S/085/61/000/004/002/002
A104/A127

13,2000

AUTHOR: Gamulin, A., Candidate of Technical Sciences

TITLE: Flight and navigation instruments of the MiG-15 aircraft

PERIODICAL: Kryl'ya Rodiny, no. 4, 1961, 17 - 19

TEXT: The article contains some information on the design, performance and use of the following MiG-15 flight and navigation instruments: Gyrohorizon АГИ-1 (AGI-1) is a combination of two instruments, i.e. a turn-and-bank indicator and a gyrohorizon placed in one case. This particular type has been designed for aircrafts of unlimited bank and pitch angles, which determined some (not specified) constructional features ensuring stability, unlimited measuring of true bank and pitch angles, decrease of errors after cornering up to 3° and increased sensitivity to changes in the pitch angle. The gyroturn indicator ЭУП-53 (EUP-53) consists of a two-stage gyroscope with an electric gyrometer, pneumatic damper and a turn-and-bank indicator of analogous construction as in AGI-1. The pneumatic damper damps the oscillations of the measuring axis. Combined airspeed indicator КУС-1200 (KUS-1200) with a scale designed according to $V_{max} = 1200 \frac{km}{hour}$ - KUS = 1200. Its performance is based on the difference between the dynamic (full) and

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Flight and navigation instruments ...

static pressures during flight, i.e. velocity head $q = \frac{\rho_{head} V^2_{true}}{2}$; ρ_{head} - air density at altitude H; V_{true} - true air speed. The indicated speed meter is shown in a figure; obviously the shift angle of the indicator linked with manometer box is a velocity head function, the scale showing the indicated speed $V_i = \sqrt{\frac{2q}{\rho_o}}$; ρ_o = 1,225 kg/cub.m - density corresponding to the pressure of a 760mm mercury column. True air speed is linked to indicated ration $V_{true} = V_i \sqrt{\frac{\rho_o}{\rho_{head}}}$ and the measuring of former is based on Formula $V_{true} = \sqrt{\frac{2q}{\rho_{head}}}$. Calculations of changing ρ_{head} at increasing altitudes are performed with the help of a special mechanism containing an aneroid box. Velocity head q measured by the air speed indicator is determined according to an analogous ratio, the wing lift according to $Y = C_y, S, q$; C_y - lift coefficient; S - wing area. Barometric altimeter ВД-17 (VD-17) and radio altimeter РВ-2 (RV-2); operation principle of the latter is described. Rate-of-Climb indicator ВАР-75 (VAR-75) and magnetic liquid compass КИ-11 (KI-11). Unfortunately KI-11 like other magnetic compasses develops a high turning error during virage. As the installation of gyro-semicompasses also failed to produce satisfactory results, a combined АГМК-3 (DGMK-3) navigation instrument set was designed. The set consists of a ПДК-3 (PDK-3) mag-

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Flight and navigation instruments ...

netic pickup, gyroscopic unit, amplifier, compass indicator, connecting box, synchronising button and ПАГ -1ФП (PAG-1FP) converter. The magnetic pickup is located in the right wing of the aircraft where there is minimum distortion of the terrestrial magnetic field by ferromagnetic masses and other factors. The gyroscopic unit stabilizes the angular position of receiver potentiometer in relation to the Earth. Consequently, the outer frame of the gyroscope and potentiometer are held in arbitrary position whereas the pickup potentiometer is oriented according to the magnetic meridian. The electromotor is operated by a mismatch signal amplified by an amplifier. A special advantage of the DGMK-3 device is that oscillations and deflections of the sensitive element are minimized by a reductor prior to transmission. A further advantage is the capacity of distant transmission to compensate for the gyroscopic wobbling occurring as a result of friction in bearings. All instruments described in this article are placed in the center of the instrument panel and subject to regular control. There are 6 figures.

Card 3/3

KOZLOVSKIY, M., inzhener-podpolkovnik; GAMULIN, A., inzhener-mayor, kand. tekhnicheskikh nauk

Reliability of rocket systems and time needed for preparation. Av.i kosm. 44 no.4:74-77 '62. (MIRA 15:4)
(Guided missiles)

GAMULIN, TOMO

Mrijescenje i mrijestilista srdele (Sardina pilchardus Walb.) u Jadranu u 1947-50 Split, Institut za oceanografiju i ribarstvo, 1954. 65 p. (Split, Yugoslavia. Institut za oceanografiju i ribarstvo, 1954. 65 p. (Split, Yugoslavia. Institut za oceanografiku i ribarstvo. Ribarstveno-bioloska ekspedicija m/b "Hvar," 1948-1949. Izvjesca. Reports, v.4, no.4C) (Spawning and spawning places of the sardine (Sardina pilchardus Walb.) in the Adriatic during 1947-50. French summary. maps (1 fold.), bibl., footnotes, graphs, tables)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

CANULIN, T.

CANULIN, T. Two questions: why do we search and why are there no sardines? p. 298.

Vol. 7, No. 11, Nov. 1955.
PORSKO RIBARSTVO
AGRICULTURE
Rijeka, Yugoslavia

So: East European Accession, Vol. 5, No. 5, May 1956

GAMULIN, T.

8492. Spawning of the sardine at a definite time of day. T. Gamulin and J. Hure *Nature, Lond.*, 1956, 177, 193—194 (Oceanographic Station, Dubrovnik, Yugoslavia). J. B. Paris

GAMULIN, Tomo, dr.

Organization of the Biological Institute of the Yugoslav Academy of Sciences and Arts, Rovinj-Dubrovnik. Hidrograf god '60 (publ. '61):12-14.

GAMULIN, Tomo, dr.

Scinetific activity of the Biological Institute of the Yugoslav Academy of Sciences and Arts, Rovinj-Dubrovnik. Hidrograf god '60 (publ. '61):36-38.

1. Direktor Bioloskog instituta Jugoslavenske akademije znanosti i umjetnosti, Rovinj-Kubrovnik.

GAMULIN-BRIDA, Helena

International Colloquium on Ecological Problems of the Littoral Zones of the Adriatic Sea. Biol glas 15 no.2: A7-A9 '62.

1. Institut za biologije Sveucilista, Odjel za ekologiju, Zagreb.

GAMULIN-BRIDA, Helena, dr

Studies on the benthonic biocoenosis of the Southern Adriatic. Bilj ocean 20 '63.

1. Institute of Biology, University of Zagreb, Department of Ecology.

L0737

S/120/62/000/004/002/047
E032/E514

24,6736

AUTHORS: Strel'tsov, N.S., Fedotov, G.M., Rozhdestvenskiy, B.V., Gustov, G.K., Gamulina, V.Ye., Nifontov, Yu.L., Indyukov, N.N., Bezgachev, Ye.A. and Kuryshev, V.S.

TITLE: The construction of the electromagnet for the 7 GeV proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 15-19

TEXT: A description is given (including sectional drawings) of the electromagnet. The electromagnet incorporates four types of magnetic sections, namely: 1) bending sections for radial focusing (total number 42), 2) bending sections for radial defocusing (total number 53), 3) bending sections for radial defocusing, located at points of beam extraction (total number 3), and 4) quadrupole lenses with zero field on the orbit (total number 14). The magnetic circuits of all the sections are assembled from insulated steel sheets (the chemical composition of the steel is similar to 32 (E2) steel). The hyperbolic pole faces were made on a special milling machine and have a curvature of 2780 cm in the horizontal plane. The system used to retain the

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steel sheets in position was such that the deformation of the hyperbolic face was ±(0.1-0.15)mm after two days and ±0.03 mm after two months. The design of the neutral pole faces of the bending magnets was such that their deformation and the electrodynamic stresses did not exceed 0.05 mm. The main winding consists of 48 turns connected in series and arranged in ten sections. The winding is made of rectangular copper piping which was manufactured by the Leningrad factory "Krasnyy Vyborzhets". In addition to the main winding, there are three compensating coils which are used to correct the magnetic field. Water cooling is used and the insulation is sufficient to withstand 2 kV. The extracting magnets, which are used to extract the beam into the experimental area, consist of a main coil (8 turns; copper piping) and two compensating coils (8 turns each; copper piping). Finally, the quadrupole lenses carry an 18 turn main winding and an 18 turn auxiliary winding, both in the form of copper piping. In order to facilitate the positioning of all the electromagnets, each of them carried special markers which were used to relate their position to the appropriate points

on the basic geodesic grid. Special mechanisms were used to adjust the magnets. They can be adjusted by ±2 cm in the vertical plane to an accuracy of 0.001 cm and by ±8.5 cm in the radial direction to an accuracy of 0.002 cm. The former adjustment is made with the aid of special wedges and the latter by a screw-driven mechanism. The azimuthal adjustment is made by simple wedge devices and can be achieved to an accuracy of ±0.05 cm. There are 6 figures.

ASSOCIATIONS: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE
(Scientific Research Institute of Electrophysical Apparatus GKAE) and
Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: April 6, 1962

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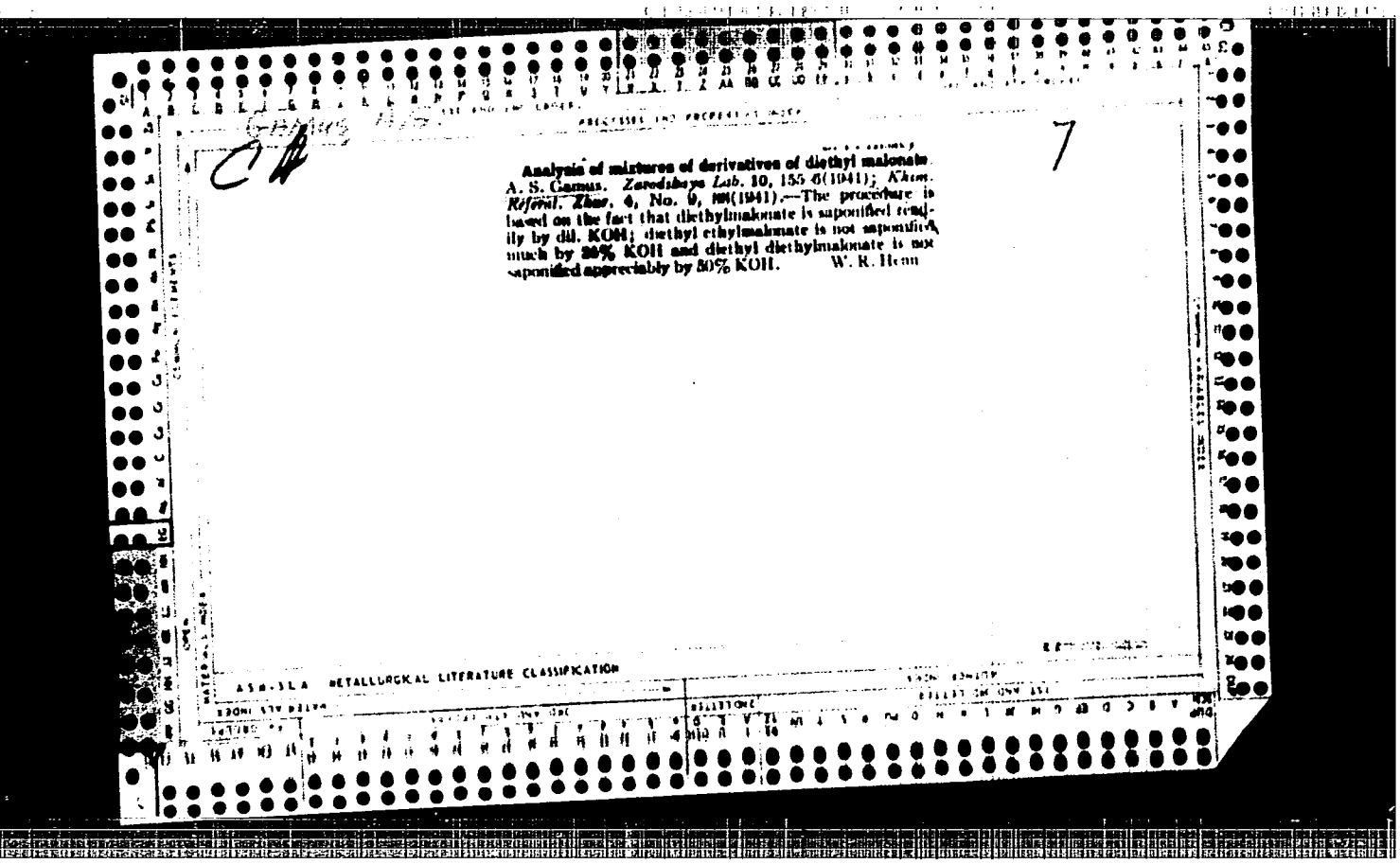

Analysis of mixtures of derivatives of diethyl malonate. A. S. Camus. *Zavodskaya Lab.* 10, 155-6(1941); *Khim. Referat. Zhur.* 4, No. 9, 88(1941).—The procedure is based on the fact that diethylmalonate is saponified readily by dil. KOH; diethyl ethylmalonate is not saponified much by 20% KOH and diethyl diethylmalonate is not saponified appreciably by 50% KOH. W. R. Henn

STREL'TSOV, N.S.; FEDOTOV, G.M.; ROZHDESTVENSKIY, B.V.; GUSTOV, G.K.; GAMULINA, V.Ye.; NIFONTOV, Yu.L.; INDYUKOV, N.M.; BEZGACHEV, Ye.A.; KURYSHEV, V.S.

Design of the electromagnet of the 7 bev. proton synchrotron. Prib. i tekh. eksp. 7 no.4:15-19 Jl-Ag '62. (MIRA 16:4)

1. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR i Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.
(Electromagnets) (Synchrotron)

GAMULYA, G.D., inzh.; KOPILOVICH, Ya.A., inzh.

Assembling hermetic refrigerating units. Khol. tekh. 38 no.6:64-65 N-D '61. (MIRA 15:1)
(Refrigeratin and refrigerating machinery)

GAMULYA, G.A. inzh.; EL'KIN, I.

New refrigeration equipment. Obshchestv. pit. no.12:34-36 D '62. (MIRA 16:1)

1. Glavnyy konstruktor Khar'kovskogo opytno-konstruktorskogo byuro torgovogo mashinostroyeniya (for El'kin).

(Refrigeration and refrigeration machinery)

ANOSOV, F.V., inzh.; GAMUS, I.M., inzh.; GARKAVI, Yu.Ye., inzh.; GOL'SHMAN, G.S., inzh.; YEVDOKIMOV, A.A., inzh.; YEREMEYEV, A.S., inzh.; ZHMUD', A.Ye., inzh.; KELAREVA, N.N., inzh.; KLOCHKOV, A.P., inzh.; LANG, A.G., inzh.; MENGEL', E.Ya., inzh.; MOROZOV, A.A., prof., doktor tekhn.nauk [deceased]; SEREBRYAKOV, G.M., inzh.; SMIRNOV, I.N., dotsent, kand.tekhn.nauk; SMIRNOV, M.I., dotsent; SHCHAVELEV, D.S., prof., doktor tekhn.nauk; SHCHERBINSKAYA, N.N., inzh.; KOVALEV, N.N., red.; MOZHEVITINOV, A.L., red.; ZABRODINA, A.A., tekhn.red.

[Turbine equipment of hydroelectric power stations: handbook on designing] Turbinnoe oborudovanie gidroelektrostantsii; rukovodstvo dlia proektirovaniia. Izd. 2., perer. i dop. Pod obshchei red. A.A. Morozova. Moskva, Gos. energ. izd-vo, 1958. 519 p. (MIRA 12:1)

1. Vsesoyuznyy institut "Gidroenergoproyekt," Leningradskoye otdeleniye.
(Hydraulic turbines)

GAMUS, Isaak Mironovich; SHRIRO, I.I., red.; SOBOLEVA, Ye.M., tekhn.red.

[Pneumatic systems in hydroelectric power stations] Pnevmaticheskoe khoziaistvo gidroelektrostantsii. Moskva, Gos.energ. izd-vo, 1959. 127 p. (MIRA 12:9)
(Hydroelectric power stations)

GAMUS, I.M.

Characteristics of the hydraulic turbines and hydromechanical equipment of the Krasnoyarsk Hydroelectric Power Station. Trudy Lengidroproekta no.1:83-89 '64. (MIRA 18:10)

VYDRIN, A.I., inzh.; GAMUS, M.Z., inzh.

Attaching plates to cooler tubes by means of a pulling process.
Energomashinostroenie 4 no.5:26-27 My '58. (MIRA 11:9)
(Refrigeration and refrigerating machinery)

GAMUS, M.Z., inzh.; BRISKIN, L.A., inzh.

Babbit lining of bushings. Energomashinostroenia 4 no.9:38-41 S '58.
(Bearings (Machinery)) MIRA 11:11)

VOLOSATOV, V.A.; VYDRIN, A.I.; GAMUS, M.Z.; BORSHCHEVSKAYA, S.I., red.; SHERMUSHENKO, T.A., tekhn.red.

[Complex plan for every worker] Kompleksnyi plan - na kazhdoe rabochee mesto. Leningrad, Lenizdat, 1959. 161 p. (MIRA 13:5)
(Machine-shop practice--Technological innovations)

S/114/60/000/012/007/009
E194/E484

AUTHORS: Vydrin, A.I. and Gamus, M.Z., Engineers

TITLE: Universal Indicating Instruments

PERIODICAL: Energomashinostroyeniye, 1960, No.12, pp.46-47

TEXT: This is a catalogue style description of six instruments based on indicator micrometers developed by the Leningrad Kirov Works. The first is a slide gauge, illustrated diagrammatically, with an accuracy of 0.01 mm which is convenient for external measurements and for checking the distance between slots where other types of micrometric instruments cannot be used. The second instrument is intended to check displacement of internal end faces of holes. The third instrument is intended to check variations in the position of grooves. The fourth has a modernized indicator head for checking beaded edges on discs. The fifth is intended for checking the radial positions of blades in assembling turbine discs. The sixth is intended for measuring the displacements at the bottom of deep holes. All the devices consist essentially of fittings to a common integrating micrometer with scale divisions of 0.01 mm; sketches of the various fittings are given. There are 6 figures.

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VYDRIN, Andrey Ivanovich; GAMUS, Moisey Zalmanovich; BOLOTIN, V.D., inzh., retsenzent; REZNITSKIY, L.M., kand. tekhn. nauk, red.; BORODULINA, I.A., red. izd-va; BARDINA, A.A., tekhn. red.

[Partial mekhanization and automation in assembly shops] Malaia mekhanizatsiia i avtomatizatsiia v sborochnom tsekhe. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 164 p. (MIRA 14:8)

(Machine-shop practice) (Automation)

GAMUS, Moisey Zalmanovich; VYDRIN, Andrey Ivanovich; SEMENENKO, P.A., inzh., red.; SHILLING, V.A., red. izd-va; GVIRTS, V.L., tekhn. red.

[Workshop rationalization and comprehensive plans]Tsekhovaia ratsionalizatsiia i kompleksnye plany. Leningrad, 1962. 24 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen metallov, no.14) (MIRA 15:8)

(Leningrad--Machine tools)

VYDRIN, A.I.; GANUS, M.Z.; [illegible], A.Ia.; DOLGTIN, V.D., inzh., retsenzent

[Mechanization of labor-consuming operations in the manufacture of steam turbines] Mekhanizatsiia trudoemkikh rabot v paroturbostroenii. Moskva, Mashinostroenie, 1964. 231 p. (MIRA 17:9)

GAMUS, M.Z., inzh.; BRISKIN, L.A., inzh.

Built-up welding of babbitt using an oxyacetylene torch.
Energomashinostroenie 10 no.4:36-37 Ap '64. (MIRA 17:6)

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S/020/60/131/06/41/071
B004/B007

AUTHORS: Gamus-Chernyavskaya, Ye. M., Reznikova, S. Sh., Stepukhovich, A. D.

TITLE: Composition of the Products Obtained by Initiated Cracking of Gaseous Alkanes and the Mechanism of This Process

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 131, No. 6, pp. 1376 - 1379

TEXT: The authors investigated the cracking of propane, butane, and isobutane, which was initiated by the addition of azomethane. The reaction products were chromatographically determined. The results are shown in table 1. Under the experimental conditions (propane: 364°, 80 torr, 10 min; butane: 355°, 70-76 torr, 10 min) no thermal cracking occurred as yet without initiator. Small admixtures (1-3%) of azomethane, however, caused intensive cracking. Unlike what is the case with thermal cracking, dehydrogenation in the case of propane predominates over demethanization. The CH_4 yield is nearly double that of ethylene. With increasing addition of azomethane (7-10%) the ethylene yield becomes 7.5 times greater, and the C_3H_6 yield is only doubled. The CH_4 yield, however, remains greater than the C_2H_4 yield. These results prove the initiating action of the CH_3 radicals. At

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azomethane concentrations of between 3 and 10% the ratio C_2H_4 : C_3H_6 increases from 0.25 to 1, approximately proportional to the concentration of azomethane. In the initiated cracking of n-butane, the ratio C_3H_6 : C_2H_4 : H_2 equals 10 : 2.5 : 1, whereas in thermal cracking (548°, 180 torr, 6 min) this ratio is 9 : 3.5 : 1 (Ref. 4). Also here demethanization predominates. In isobutane the ratio C_3H_6 : C_2H_4 : H_2 in initiated cracking is 2 : 6 : 1, and in thermal cracking 7 : 3 : 1. With increased addition of azomethane, the action of the initiator is limited, as predicted by the authors (Ref. 5). The formation of propane in the initiated cracking of isobutane has as yet not been explained. The authors suggest trying initiated cracking on an industrial scale as a new method. They thank R. V. Kosyreva for her collaboration in analyses. There are 1 table and 5 Soviet references.

80095

Composition of the Products Obtained by Initiated Cracking of Gaseous Alkanes and the Mechanism of This Process

S/020/60/131/06/41/071
B004/B007

ASSOCIATION: Saratovskiy gosudarstvennyy universitet im. N. G. Chernyshevskogo (Saratov State University imeni N. G. Chernyshevskiy)

4

PRESENTED: December 7, 1959, by V. N. Kondrat'yev, Academician

SUBMITTED: November 30, 1959

Card 3/3

BURKOV, V.A.; BOGDANOV, K.T.; GAMUTILOV, A.Ye.; SHIREY, V.A.

The technique of hydrological work at the open sea. Trudy Inst.okean. 24:5-172 '57. (MIRA 10:10)
(Hydrology) (Oceanographic instruments)

AUTHORS: Sabinin, K. D., Gamutilov, A. Ye. 5o-58-5-13/2o

TITLE: An Attempt to Use the Laboratory-Interferometer ITR-2 for Determining the Salinity of Sea Water (Opyt primeneniya laboratornogo interferometera ITR-2 dlya opredeleniya solenosti morskoy vody)

PERIODICAL: Meteorologiya i Gidrologiya, 1958, Nr 5, pp 51-54 (USSR)

ABSTRACT: During the 25-th voyage of the ship "Vityaz" the chemical method (titration on chlorine) was thoroughly compared to the optical one (as mentioned in the title). The principle of action of the interferometer is based on the diffraction by a double slit. It is described in detail. The device can be used for the analysis of clear, non-dyed solutions, when the relation among the salts remains constant. The sea water satisfies this condition. Figure 1 shows such a Soviet interferometer for liquids ITR -2. On the vessel "Vityaz" a 4 cm-cuvette was thoroughly calibrated. The method of titration is described. The technique of operating instructions for the device was somewhat more precisely defined for the case of sea water. Of the 155 determinations by the interferometer which were in parallel controlled by titration the authors constructed a diagram (figure

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An Attempt to Use the Laboratory-Interferometer ITR-2 for Determining the Salinity of Sea Water 5o-58-5-13/2o

2) The results almost exactly form a straight line. The following conclusions were drawn: 1) Work with the interferometer ITR-2 is very simple and can be performed on rough sea. Subjective errors are almost excluded. 2) The accuracy of results, as compared to titration, is very high. 3) The speed of determinations depends on the different temperatures of the samples. Although the interferometer cannot entirely replace the classical method of Knudsen it is already now clear that the device has a great future. The performed works do not enter a claim for the determination of all possibilities of the application of the interferometer in oceanography. There are 3 figures, 1 table.

1. Sea water--Properties 2. Sodium chloride--Determination
3. Interferometers--Applications

Card 2/2

GAMUTILOV, A.Ye.

Hydrogeologic characteristics of waters in Kronotskiy Gulf.
Trudy Inst.okean. 36:40-58 '59. (MIRA 15:4)
(Kronotskiy Gulf--Oceanography)

LEONT'YEVA, V.V.; GAMUTILOV, A.Ye.

Effect of Pacific waters on hydrological conditions in Kronotskiy Gulf, as revealed by the survey carried out in the spring of 1955. Trudy Inst.okean. 36:59-72 '59. (MIRA 15:4)
(Kronotskiy Gulf--Oceanography)

GAMUTILOV, A.Ye.; GRUZINOV, V.M.

Zonal distribution of hydrological characteristics in the Atlantic Ocean. Trudy MGI 19:93-102 '60. (MIRA 14:7)
(Atlantic Ocean--Ocean temperature) (Atlantic Ocean--Salinity)

SABININ, K.D.; GAMUTILOV, A.Ye.

Possibility of using the ITR-2 laboratory interferometer to determine the salinity of sea water. Trudy Inst.okean. 40:175-183 '60. (MIRA 14:8)

(Interferometry) (Salinity)

GAMUTILOV, A.Ye.; ISTOSHIN, Yu.V.

Hydrologic conditions of the Sargasso Sea and the Gulf Stream area adjacent to it. Trudy Mor.gidrofiz. inst.AN URSR 29:29-42 '64. (MIRA 17:7)

NEKRASOV, I.Ya.; GAMYANIN, G.N.

Mineral associations and conditions governing the formation of cobalt deposits in northeastern Yakutia. Geol.rud.mestorozh. no.6:54-73 N-D '62. (MIRA 15:12)

1. Institut geologii Yakutskogo filiala Sibirskogo otdeleniya AN SSSR.
(Yakutia--Cobalt)

GAMYANIN, G.N.

Findings of tillite in tin ore and lead-zinc deposits in the northeastern part of the Yakut A.S.S.R. Nauch.soob. IAFAN SSSR no.7:145-150 '62. (MIRA 16:3)

(Yakutia—Tillite)

GRAYANIN, G.N.

GRAYANIN, G.N.

[illegible] of ore minerals in the [illegible] of the upper Indigirka Valley. Geol. i geofiz. no.[illegible] 1961. (MIRA 18:9)

1. Institut geologii Yakutskogo filiala Sibirskogo otdeleniya AN SSSR, Yakutsk.

GAMYGIN, L. A.

32508. Gamygin, L. A. Kompleksnyye brigady ratsionalizatorov po uluchsheniyu proizvodstva na predpriyatiyakh Shaturskogo torfotresta. Torf. prom-st' 1949, No. 10, s. 19-20.

SO: Letopis' Zhurnal'nykh Statey, Vol. 44

GAMYGIN, L. A.

Performance of the machine UKB-TUM at the peat enterprise "Tugolesskii bor" during the season of 1951. Torf. prom., 29, No 2, 1952.

(1)

58. MECHANIZED SOD COLLECTING IN SHATURA PEAT TRUST. Gamygin, L.A.
(Torf. Prom. (Peat Ind., Moscow), Feb. 1953, 7-9).

Gamygin, L.A.

SHPITSMAKHER, O.A., inzhener; RYABCHIKOV, M.Ya.; POLIKARPOV, A.A., inzhener; GAMYGIN, L.A., inzhener.

Concerning the work of MPT machines in moving drainage pipes during the 1953 season. Torf.prom. vol. 30 no.11:7-14 N-D '53. (MLRA 6:11)

1. Karinskoye torfopredpriyatiye (for Shpitsmakher). 2. Chernoramenskiy torfotrest (for Ryabchikov). 3. Orekhovo-Zuyevskiy torfotrest (for Polikarpov). 4. Shaturskiy torfotrest (for Gamygin). (Peat industry)

GAMYNIN, A.

Assure the operation of diesel trucks in winter. Avt.transp.34 no.11:26 N '56. (MLRA 9:12)
(Motortrucks--Engines--Cold weather operation)

GRAMYNIN, N. S.

p 3

PHASE I BOOK EXPLOITATION SOV/4026
SOV/11-M-117

Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze

Issledovaniya v oblasti samoletnykh gidravlicheskikh ustroystv; sbornik statey (Research in the Field of Aircraft Hydraulic Devices; Collection of Articles) Moscow, Oborongiz, 1959. 101 p. (Series: Its: Trudy, vyp. 117) Errata slip inserted. 2,650 copies printed.

Sponsoring Agency: RSFSR. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya.

Ed.: Blandov, Candidate of Technical Sciences, Docent; Ed. of Publishing House: V. M. Tokar'; Tech. Ed.: V. P. Rozhin; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This collection of articles is intended for scientific workers and engineers concerned with aircraft hydraulic devices. It may also be of use to students of advanced courses in related subjects.

COVERAGE: The articles in this collection present theoretical and experimental research on aircraft hydraulic devices. The following

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topics are discussed: design of fluid shock absorbers, influence of low temperature on the performance of rubber packings in hydraulic aggregates, statics and dynamics of hydraulic conduit volume regulation, and methods of determining viscosity of liquids containing diffused air. This monograph is the first to be published on a subject basis by the Department of Aircraft Equipment of MAI (Moscow Aviation Institute). The authors are young scientists of the Institute and industry. No personalities are mentioned. There are references at the end of each article.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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S/124/62/000/004/015/030
D251/D301

AUTHOR: Gamynin, N. S.

TITLE: The equation of motion and frequency characteristics of a hydraulic drive with volume control

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1962, 75, abstract 4B505 (Tr. Mosk. aviats. in-ta, 1959, no. 117, 60-81)

TEXT: A reversible hydraulic drive with closed circulation is considered. The differential equation of the hydraulic drive is deduced with the assumption that of small variation of the regulated parameter when the influence of the zone of saturation does not have a substantial value; the absence of a zone of insensitivity and dry friction; the constancy of the temperature and viscosity of the liquid; and the constancy of the constructional parameters and the moment of the load. Taken into consideration are the compressibility of the liquid, viscous friction, leakage, inertia of the elements of the drive, hydraulic shock in the main overflow

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and hydraulic resistance in the pipe-drive. The differential equation obtained is considerably simplified by considering that the time of simultaneous variation of the velocity of the hydro-system does not exceed the time of a direct hydraulic shock. Hence the error is reduced with the increase of the overflow length of the pipe-drive. Theoretical and experimental mechanical and velocity characteristics are cited for an open hydraulic drive and also its amplitude-phase characteristics for different values of the coefficient of stress. From a consideration of these it follows that increase of the length of the pipe-drives and the moment of inertia on the shaft of the hydromotor makes the dynamic characteristics of the hydraulic drive deteriorate and diminishes the margin of stability with respect to the amplitude and phase. A method is proposed for the experimental investigation of the basic dynamic parameters: The generalized constant of time, the coefficient of relative damping and the stress coefficient. The suggested theoretical dependence for calculating the dynamic parameters, amplitudes and phases has precision of 10 - 12%, only the case of a long tube (2 - 3 m). With short tube-drives a perceptible dispersion of the

The equation of motion ...

theoretical and experimental values is observed. [Abstracter's note: Complete translation.]

Card 3/3

GAMYNIN, N.S., kand.tekhn.nauk

Characteristics of the hydraulic engines of pumps and valves used in servomechanisms. Trudy MAI no.134:100-106 '61.
(MIRA 14:8)

(Servomechanisms) (Hydraulic engines)

GAMYNIN, Nikolay Sergeyevich; KARPOV, N.I., kand. tekhn. nauk, retsenzent; YANOVSKIY, I.L., inzh., red.; VINOGRADSKAYA, S.I., red. izd-va; ROZHIN, V.P., tekhn. red.

[Fundamentals of a hydraulic tracking drive] Osnovy sledia-shchego gidravlicheskogo privoda. Moskva, Gos. nauchno-tekhn. izd-vo Oborongiz, 1962. 292 p. (MIRA 15:4)
(Oil-hydraulic machinery)

PHASE I BOOK EXPLOITATION SOV/6041

Gamynin, Nikolay Sergeyevich

Osnovy sledyashchego gidravlicheskogo privoda (Fundamentals of Hydraulic Servos) Moscow, Oborongiz, 1962. 292 p. Errata slip inserted. 11,000 copies printed.

Reviewer: N. I. Karpov, Candidate of Technical Sciences; Ed.: I. L. Yanovskiy, Engineer; Ed. of Publishing House: S. I. Vinogradskaya; Tech. Ed.: V. P. Rozhin; Managing Ed.: S. D. Krasil'nikov, Engineer.

PURPOSE: This book is intended for technical personnel dealing with problems of design and testing of hydraulic servodrives in machinery and machine tools; it may also be useful to students of aircraft hydraulic systems.

COVERAGE: The book presents the fundamentals of the theory and methods of designing hydraulic servodrives and calculating the static and dynamic characteristics of hydraulic-transmission elements: pumps, actuators, slide valves, and amplifiers. Theoretical and experimental data on throttle-controlled and variable-volume hydraulic drives used as actuating elements in servosystems are presented. The calculation methods for velocity, mechanical, and frequency

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characteristics and for transient processes are given. The book also provides a description and analysis of hydraulic drives with mechanical feedback and electromechanical control, widely applied in automatic control of modern aircraft. No personalities are mentioned. There are 17 references, all Soviet.

TABLE OF CONTENTS:

GAMZA, A., inz.

Bushing insulators without bolts and brackets. Energetyka Pol 14 no.3:84-85 Mr '60. (EEAI 9:8)
(Electric insulators and insulation)

GAMZA, B.

Joint commercial warehouses. Sov. torg. 34 no. 1:13-17 Ja '61. (MIRA 14:1)

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MIROSHNICHENKO, Nikolay Semenovich; GAMZA, D.N., red.; ISLENT'YEVA, P.G., tekhn. red.

[Preparing the runner and ladle in open-hearth furnace plants] Podgotovka zheloba i kovsha v martenovskom tsekhe. Moskva, Metallurgizdat, 1963. 56 p. (MIRA 16:7)
(Open-hearth furnaces--Equipment and supplies)

GERMAIDZE, G.Ye.; KORSHUNOV, V.S.; KHOROSHAVIN, L.B.; FREYDENBERG, A.S.; GAMZA, D.N., red.

[Heating up and rapid fritting of open-hearth furnace hearth bottoms] Razogrev i skorostnoe navarivanie poda martenovskikh pechei. [By] G.E.Germaidze i dr. Moskva, Metallurgiia, 1964. 110 p. (MIRA 17:11)

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AUTHOR: Shkol'nikov, Ya. A.; Polik, B. M.; Karakhanidi, N. G.; Ivanov, P. K.; Rober, E. L.; Ulybyshev, V. V.; Alen'kin, A. T.; Bugrova, N. N.; Binakov, D. P.; Shchipin, I. Ye.; Gur'yeva, Yu. N.; Yefimova, M. I.; Nechayeva, Ye. G.; Yesilkina, K. M.; Ivanova, A. I.; Dayn, E. P.; Nabatov, V. G.; Novoyevskaya, Ye. A.; Kukin, Ye. B.; Balashov, V. N.; Gamza, L. B.

TITLE: Glass for glass fibers. Class 32, No. 170369

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 119

TOPIC TAGS: glass, glass fiber

ABSTRACT: An Author Certificate has been issued for a glass suitable for making glass fibers. To increase chemical durability, to prevent corrosion of alloys of aluminum and other light metals, and to improve processability, the glass is formulated to contain: 58—63% SiO_2, 2—4% B_2O_3, 6—8% Al_2O_3, 0.5—1.5% F_2O_3, 4—6% ZrO_2, 6—8% CaO, 12—13% Na_2O, and 1.5—2% K_2O. [SM]

ASSOCIATION: none

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